

## Patent Claims

1. An apparatus (MC) for, in particular mobile, data acquisition having at least one input interface (S1..S4) for supplying input signals (I1..I4), in particular operating data relating to a vehicle (F1..Fn), a machine etc., having a signal processing apparatus (1), which can be coupled to the input interface (S1..Sn), for signal processing of the input signals (I1..I4) which are supplied via the input interface or interfaces (S1..S4), and for recording data which can be predetermined in the input signals (I1..I4) at times which can be predetermined, and having an output interface (SA) for supplying output data (17), which is derived from the input signals (I1..I4) in the signal processing apparatus (1) in accordance with rules (LR, AR, DR) which can be predetermined, from the signal processing apparatus (1) to a transmitting/receiving unit (5) for automatic transmission, and/or transmission initiated on request, of the output data (18) to a control center (15) and/or to a predetermined receiver (E).

2. The apparatus as claimed in claim 1, characterized in that the apparatus (MC) has at least one memory (AR, DR, LR) which can be written to, for storage of an operating system for the apparatus (MC) and/or the rules (LR, AR, DR) which can be predetermined, in which case this memory (AR, DR, LR) can be remotely loaded via the transmitting/receiving unit (5).

3. The apparatus as claimed in one of claims 1 or 2, characterized in that the apparatus (MC) has a data converter (EA), which is arranged between the input interface (S1, S2, S3, S4) and the signal processing device (1) and which

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is used for removing distortion from the supplied input signals (I1..I4) and for providing a standard data format for the input signals (I1..I4) which are supplied via the input interface or interfaces  
5 (S1..S4).

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4. The apparatus as claimed in one of claims 1 to 3,  
characterized  
in that the apparatus (MC) has an address allocation  
unit (AZ), which is provided between the data converter  
5 (EA) and the input interface or interfaces (S1..S4),  
and is intended for conversion of the source-specific  
addresses of the input signals (I1..I4) to the address  
format of the data converter (EA).
- 10 5. The apparatus as claimed in one of claims 1 to 4,  
characterized  
in that the signal processing apparatus (16) has a data  
analysis unit (D), which is intended for recording  
15 selected input signals (I1..I4) at times which can be  
predetermined, in which case the recording rules are  
predetermined starting from the control center (15) for  
short-term monitoring of information which can be  
derived from the input signals.
- 20 6. The apparatus as claimed in one of claims 1 to 5,  
characterized  
in that the apparatus (MC) is installed in a mobile  
vehicle (F1..Fn) which is operated by a motor or engine  
(3), and has a connecting apparatus for connection to  
25 the supply voltage in the vehicle (F1..Fn), in that the  
apparatus (MC) has means for detection of at least one  
first "Generator of the supply voltage source (B) in  
operation" first operating mode and of at least one  
"Generator of the supply voltage source not in  
30 operation" second operating mode, with the work of the  
data analysis unit (D) being interrupted in the second  
operating mode.
7. The apparatus as claimed in one of claims 1 to 6,  
35 characterized  
in that the signal processing apparatus (16) has a data  
processing unit (L) for recording information data

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which can be derived from the input signals in accordance with rules which can be predetermined, and in that the apparatus (MC) has a first memory (LR)

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for storage of the rules for the data processing unit (L).

8. The apparatus as claimed in one of claims 1 to 7,  
5 characterized  
in that the first memory (LR) has two memory areas,  
with a first memory area containing the rules for the  
"Generator of the supply voltage source in operation"  
10 rules for the "Generator of the supply voltage source  
not in operation" operating mode.

9. The apparatus as claimed in one of claims 1 to 8,  
characterized  
15 in that the signal processing apparatus (16) has an  
alarm unit (A) for monitoring information data which  
can be derived from the input signals (I1..I4) in  
accordance with alarm rules which can be predetermined,  
and in that the apparatus (MC) has a second memory (AR)  
20 for storage of the rules for the alarm unit (A).

10. The apparatus as claimed in one of claims 1 to 9,  
characterized  
in that the apparatus (MC) has an alarm archive (AA)  
25 for entering alarms that have occurred.

11. The apparatus as claimed in one of claims 1 to 10,  
characterized  
in that the signal processing apparatus (1) [lacuna] a  
30 monitoring unit (DM) for direct monitoring of input  
signals (1a..4a) and/or of information data which can  
be derived from the input signals (I1..I4).

12. The apparatus as claimed in one of claims 1 to 11,  
35 characterized  
in that the control center has a control and  
monitoring system which is also intended for direct  
control of operating modes of a

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vehicle (F1..Fn) which is coupled to the apparatus, via control signals (I1..I4).

13. The apparatus as claimed in one of claims 1 to 12,  
5 characterized  
in that the apparatus (MC) can be coupled to a GPS  
receiver.

14. The apparatus as claimed in one of claims 1 to 13,  
10 characterized  
in that the apparatus (MC) is integrated in a car radio  
receiver and/or in a car radio receiver/mobile  
telephone appliance combination.

15 15. A method for, in particular mobile, data acquisition of input signals (I1..I4) which are supplied via at least one input interface (S1..Sn), in particular of operating data relating to a vehicle (F1..Fn), a machine etc., in which the input interface  
20 (S1..Sn) is coupled to a signal processing apparatus (1) for signal processing of the input signals (S1..S4) which are supplied via the input interface (S1..S4), in which data which can be predetermined in the input signals (S1..S4) are recorded by the signal processing  
25 apparatus (1) at times which can be predetermined, and output data (18) is derived from the input signals (S1..S4) in the signal processing apparatus (1) in accordance with rules which can be predetermined, which output data (18) is passed on automatically to a  
30 transmitting/receiving unit (5) and/or on request to a control center (15) and/or to a predetermined addressee (E).